

**USEPA/OECA/OC State and Tribal Assistance Grants (STAG) 2000-2001  
Louisiana: Development of EPA/State Interfaces  
Final Report  
Uploaded to the Internet: 6/7/2004**

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**Quarterly Reporting Form for EPA's 2000  
Enforcement and Compliance Assurance Grants  
as of 05/27/04  
FINAL REPORT**

Reporting Period: Year: 2004(1) - 01/01/04 – 04/30/04

**I. Information**

State and Department: **Louisiana Department of Environmental Quality**

Title of Project: **Development of EPA/State Interfaces X-986727-01-0**

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Funds Received by State (Date and amount): 3-01-02 for \$200,000

EPA Regional Project Officer: Linda Thompson, Region 6

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**II. Status of Project Milestones**

LDEQ has met approved milestones. Progress and update information was provided in the 12/06/02 – 6/30/03, the 7/1/03 – 9/30/03 and the 10/01/03 – 12/31/03 reports which were submitted previously. LDEQ requested and was granted an extension of the grant to **May 31, 2004** to allow for additional time to develop/construct/test and implement the AFS/AIRS interface. To date: Methods Contractor used ORACLE 9i/DISCOVERER. Mapping of all (4 of 4) MANDATORY AFS/AIRS PROGRAM AREAS (100%) completed. Areas are PLANT GENERAL, AIR PROGRAMS, AIR PROGRAM POLLUTANTS, ACTIONS. Sixty three (63) of the 63 MANDATORY AFS/AIRS DATA REQUIREMENTS (100%) have been mapped, tested and validated. In total, forty-one (41) scheduled staff/contractor meetings/conferences (100%) have

been conducted. More than sixty-two (62) individual national level teleconferences/video meetings and regional work sessions including the Data Vision Support staff, the National AFS PROGRAM MGR/ASST, EPA's AFS Security Manager, the Region VI AFS Security Manager, selected AFS Help-Desk staff and the AFS Primary Sustainment Contractor (TRI) have been held.

**III. Status of Project Completion. - PROJECT COMPLETED - FINAL REPORT -** LDEQ has completed this project and is currently uploading all identified Clean Air Act Minimum Data Requirements (MDR), including the newly developed National Compliance Management System (CMS) data elements, into EPA's Air Facility Subsystem (AFS) utilizing the new Tools for Environmental Management and Protection Organizations (TEMPO)/AFS Interface. All state air data records contained in LDEQ's one stop data integration system TEMPO were reviewed, and verified as part of this project.

**IV. Results:** The initial upload of 1,665,115 updated air quality records was completed using this new system on April 22, 2004. In addition, all Title V Certifications (619) for 2002-2004, all 2000-2004 Stack Tests (516), and all 2003-2004 Air Inspections (1012) have been uploaded (ON April 24, 2004) to AFS using this interface. Due to existing Universal Interface limitations, the project did not develop a capability to automatically upload Title V Permit Program Data Elements (PPDE). The TEMPO/AFS Interface produces the Title V PPDEs in an exportable text file and .xls spreadsheet. This Title V information has been entered directly into AFS and will continue to be entered directly until EPA modifies the National Universal Interface (UI). Benefits of using the new AFS translator and the updated National UI follow: **1)** A 90 percent reduction in the effort needed to report federally required mandatory data (MDRs); **2)** A 75 percent reduction in computers, word processing and mainframe resources needed; **3)** A 100 percent reduction in workloads due to the elimination of duplicate entry into multiple state and national systems; **4)** The enhancement and streamlining of state and national data transfer procedures; **5)** Implementation of a highly efficient quality assurance process that provides more complete and accurate reporting to EPA, other state agencies and the public; **6)** A seamless transfer of all MDRs including new the CMS data elements; **7)** A 50% reduction in development and maintenance costs for computer hardware and software; **8)** Introduction of simplified transaction platforms and establishment of transparent reporting formats; **9)** Consolidated Standard Operating Procedures which are as a minimum equivalent to those contained in EPA's Batch Edit procedures; **10)** Rapid error identification and correction; **11)** Elimination of errors due to multiple manual entry; and **12)** Creation of a more user-friendly data system; **13)** A net decrease in the number of full time employees required for data entry. These individuals are available for other environmental enforcement, management and protection tasks. LDEQ is currently sharing "lessons learned" and project source documents with three other states and one Native American Tribe. The information is available to all other states upon request.

**V. Other:** The Project Overview Report is included as Attachment 1. Request the results

identified in paragraph IV above be copied to the EPA Grant Abstract website. This reports will be sent to EPA Regional Project Officer, and to Bob Tolpa at:

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## **Attachment 1 AIRS\_TO\_EPA**

May 27, 2004

### **Project Overview Report**

The purpose of this project is to extract LDEQ's TEMPO data and create UI (Universal Interface) text files where these files will be batched for transmission to the EPA's AFS/AIRS system. This will be accomplished via DOS command files (to run Oracle DISCOVERER workbooks on WINDOWS local PC in batch -- background mode), Oracle DISCOVERER workbooks, EXTERNAL table definitions (both for DOS text files and VMS text files), FTP parameter files (for copy of text files to VMS server), and use of the UI website for preparation of the text files.

#### **Project -- Steps Taken**

This project was accomplished by the following basic steps:

- 1 -- Acquire target (Universal Interface) record layout documentation.
- 2 -- Modify a copy of these documents with area to define source (TEMPO) data elements.
- 3 -- Hold "mapping discussion" meetings with DEQ stakeholders to determine source requirements.
- 4 -- Develop DISCOVERER Business Area/Folders/Workbooks to analyze potential TEMPO source data.

5 -- Develop QA/QC workbooks (if needed) to “clean-up” source data; some of these may become part of the ongoing process (pre-extract).

6 -- Develop PRODUCTION extract workbooks along with DOS command files to run workbooks in background (batch) mode to create UI extract text files and in-house spreadsheet (xls) files .

7 -- Develop FTP command lines (along with ftp parameter files) for execution in DOS command files where needed for UI text files to WEB server and EXTERNAL TABLE text files to VMS server.

8 -- Create USER Operations manual for execution of local PC desktop icon with USERNAME/PASSWORD (non-echo mode) that executes all needed processes.

9 -- Create, Coordinate and obtain approval of a Departmental Standard Operations Procedure (SOP) to document the process.

### **Production Environment**

The production environment for this process will consist of several components both on WINDOWS local PC, WINDOWS server shared directory folders, WEB server directory, and VMS directory.

The DOS commands (located in directory: AIRS\_LOAD\_DIR) will be executed from WINDOWS local PC desktop icons by DEQ staff with full access to the AIRS\_TO\_EPA directory (and its sub-folders) on WINDOWS shared network directory.

Only one DOS command file (AIRS\_TO\_EPA.cmd) located on the local PC as a desktop icon will be used for USERNAME/PASSWORD (non-echo mode) entry and present the user with a “process-menu” selection of one of the three processes mentioned below.

The first process selection (DOS command file -- AIRS\_QAQC\_WORKBOOKS.cmd) executed will be used for quality assurance/quality control PRIOR to extract of TEMPO data. This command file will automatically create a subfolder under the AIRS\_LOAD\_DIR directory in a date/time format of AIRS\_QAQC\_WORKBOOKS\_YYYYMMDD\_HHMM. In this directory will

be DISCOVERER export of Excel (.xls) files which will only be created if at least one or more records are reported.

The second process selection (DOS command file -- EXTRACT\_AIRS\_EXPORT\_FILES.cmd) executed will be used to run five other DOS command files in the following order:

-- PLANT\_GENERAL\_EXTRACT.cmd (extract the needed TEMPO data [Facility demographic data] for creation of UI interface text file)

-- AIR\_PROGRAM\_EXTRACT.cmd (extract the needed TEMPO data [Air Permit data] for creation of UI interface text file)

-- AIR\_PROGRAM\_POLLUTANT\_EXTRACT.cmd (extract the needed TEMPO data [Air Permit / Pollutant regulation data] for creation of UI interface text file)

-- ACTION\_EXTRACT.cmd (extract the needed TEMPO data [Activity tasks data] for creation of UI interface text file)

-- ACTION\_TITLEV\_BATCH\_EXTRACT.cmd (DATA ENTRY spreadsheet [xls] report for TITLE V BATCH Action records directly into the EPA's AFS/AIRS system)

This command file will automatically create a subfolder under the AIRS\_LOAD\_DIR directory in a date/time format of AIRS\_EXTRACTS\_YYYYMMDD\_HHMM. In this directory will be the following three files (per section mentioned above) similar to the following format: PLANT\_GENERAL\_EXTRACT\_RUNLOG.TXT (log of DOS command file execution), PLANT\_GENERAL\_EXTRACT.TXT (text file to be used by UI website), PLANT\_GENERAL\_EXTRACT.XLS (Excel file for use by DEQ staff for data analysis) along with some after-extract DISCOVERER workbooks with export of XLS files. The .TXT files will then be copied to the AIRS\_EXTRACT\_FILES directory (for FTP to WEB server directory for IMPORT to UI website ) and the .XLS files will be copied to that directory's subfolder AIRS\_EXTRACT\_SPEADSHEETS directory.

The third process selection (DOS command file -- COPY\_EXTRACT\_PREV\_AIRS\_FILES.cmd) will be executed only after the text files imported to the UI website are actually transmitted and UPDATED on the EPA's AFS/AIRS data system. This command file will copy/append some of the text files to a previous (\_PREV.TXT) copy of the text

file in the AIRS\_LOAD\_DIR directory then execute some after-copy DISCOVERER workbooks with export of XLS files which will be copied to the AIRS\_EXTRACT\_SPEADSHEETS directory.

A fourth process (DOS command file -- RECOVER PREV FILES FROM SAVECOPY.cmd) will be executed directly from the AIRS\_LOAD\_DIR directory (only by DEQ IS staff -- when needed) if the third process selection (mentioned above) has been run IN ERROR. This command file will RECOVER the text files to their previous (...\_PREV.TXT) state by copying from a set of “saved copies” (...\_PREV\_SAVECOPY.TXT) text files in the AIRS\_LOAD\_DIR directory.

### **Production File Directories and Contents**

The production files will include the following: Documentation, DOS command files, DISCOVERER run workbooks, FTP to VMS and WEB servers parameter files, EXTERNAL TABLE definitions (VMS), and DISCOVERER development workbooks.

The Documentation directory/sub-directories will contain the following:

- DOCUMENTATION (generic documents (this document and Operator’s manual, etc.)
- MAPPING\_SHEETS (UI and TITLE V BATCH mapping sheets -- describes the where/what/how for TEMPO data retrieval)
- WORKBOOK\_CREATION (DISCOVERER development/production workbook creation contents --detail for possible rebuild/modification)
- WORKBOOK\_EULXLS\_FILES (DISCOVERER EUL environment workbook XLS files --electronic copy of EUL -- End User Layer detail)
- WORKBOOK\_PRODXLS\_FILES (DISCOVERER workbook XLS of AFTER-THE-EXTRACT and AFTER-THE-COPYPREV production workbooks -- electronic copy of report output)
- WORKBOOK\_DEVL\_PRODXLS\_FILES -- (DISCOVERER workbook XLS of DEVELOPMENT production workbooks -- electronic copy of report output)

-- WORKBOOK\_EXTRACT\_PROD\_XLS\_FILES -- (DISCOVERER workbook XLS of EXTRACT production workbooks -- electronic copy of report output)

-- WORKBOOK\_QAQC\_PROD\_XLS\_FILES -- (DISCOVERER workbook XLS of QAQC production workbooks -- electronic copy of report output)

The DOS command files directory (PROD\_DOS\_CMDS) will contain the following:

-- AIRS\_TO\_EPA.cmd (prompt user with three process menu selection [1 -- QAQC WORKBOOKS, 2 -- EXTRACT AIRS FILES, 3 -- COPY PREVIOUS AIRS FILES], then request user's USERNAME/PASSWORD [non-echo] for execution of DISCOVERER workbooks in batch [background mode])

-- AIRS\_QAQC\_WORKBOOKS.cmd (execute the QA/QC workbooks prior to TEMPO data extract)

-- EXTRACT\_AIRS\_EXPORT\_FILES.cmd (execute FIVE DOS command files to extract from TEMPO data)

-- PLANT\_GENERAL\_EXTRACT.cmd -- execute workbooks that extract TEMPO data and create UI text file -- Plant General – Facility demographic data

-- AIR\_PROGRAM\_EXTRACT.cmd -- execute workbooks that extract TEMPO data and create UI text file -- Air Program – Air Permit data

-- AIR\_PROGRAM\_POLLUTANT\_EXTRACT.cmd -- execute workbooks that extract TEMPO data and create UI text file -- Air Program Pollutant – Air Permit / Pollutant regulation data

-- ACTION\_EXTRACT.cmd -- execute workbooks that extract TEMPO data and create UI text file -- Action – Activity tasks data

-- ACTION TITLEV BATCH EXTRACT.cmd -- execute workbooks that extract TEMPO data and create Excel xls file for MANUAL DATA ENTRY -- Action (TITLE V BATCH) -- Activity tasks data

-- COPY\_EXTRACT\_PREV\_AIRS\_FILES.cmd (only after UI text files have been updated on EPA's AFS/AIRS system then this will copy/append selected text files as ..\_PREV.TXT files for use on next extract process and execute some after-the-extract workbooks as XLS files).

-- RECOVER\_PREV\_FILES\_FROM\_SAVECOPY.cmd (will be executed directly from the AIRS\_LOAD\_DIR directory (only by DEQ IS staff -- when needed) if the COPY\_EXTRACT\_PREV\_AIRS\_FILES.cmd (mentioned above) has been run IN ERROR. This command file will RECOVER the text files to their previous (...\_PREV.TXT) state by copying from a set of "saved copies" (...\_PREV\_SAVECOPY.TXT) text files in the AIRS\_LOAD\_DIR directory).

The DISCOVERER run workbooks directory/sub-directories will contain the following:

-- PROD\_RUN\_WORKBOOKS (consists of DISCOVERER workbooks for AFTER-THE-EXTRACT and AFTER-THE-COPYPREV as XLS files)

-- AIRS\_EXTRACT\_WORKBOOKS (DISCOVERER workbooks run in batch [background mode] by the extract DOS command files mentioned above)

-- AIRS\_QAQC\_WORKBOOKS (DISCOVERER workbooks run in batch [background mode] by the QA/QC DOS command file mentioned above)

The FTP to VMS/WEB parameter files directory (PROD FTP FILES) consists of FTP (...ftp) parameter files for account/password and other parameters necessary to "copy" the text files from the DOS network directories to the VMS server directory where the database resides or the WEB directory used by UI import function. This is necessary for the use of Oracle's EXTERNAL TABLE feature for accessing data directly from a "flat file in a directory"; it will also be used to "copy" the four UI text files from the DOS network directory to the server used for WEB file access after login to the UI website for "import" purposes.

The EXTERNAL TABLE (only available in Oracle database version 9.+) definitions directory (EXT\_TABLE\_SQLS\_VMS9I) will contain the SQL definition of EXTERNAL TABLES ("flat file in a directory") for the VMS file directory usage (fixed record length = actual length + 1).



These definitions are not only for the UI text files being created but also for “interim” text files that are part of the TEMPO extract process, some select ...\_PREV previous text file copies and some of the UI previous extract (from CDS) and code text files.

The DISCOVERER development workbooks directory (PROD\_DEVL\_WORKBOOKS) contains all the other DISCOVERER production workbooks that are used to develop the production workbooks that are used as part of the TEMPO extract processes.

**NOTE: Any user running any of the menu options MUST HAVE full network directory access privileges to the folder and sub-folders; MUST HAVE a VALID Username and Password for this database LOGIN purposes and MUST ONLY CONDUCT prescribed procedures on a computer capable of running the programs and software identified in these instruction. All users MUST CONTACT the designated staff members prior to initiating any procedures defined herein.**

**NOTE2: Any user running any of the menu options MUST HAVE the following DISCOVERER desktop TOOLS → OPTIONS values set as follows: Limit retrieved data → 100000 rows, Prevent queries from running longer than 60 minutes.**